

HS3 - Global Hawk #872 10/06/12 Science Report

Aircraft: [Global Hawk - AFRC #872](#) ([See full schedule](#))

Date: Saturday, October 6, 2012

Mission: HS3

Mission Location: WFF-WFF

Mission Summary:

Hurricane and Severe Storm Sentinel (HS3) Mission

HS3 2012-10-06 Flight Report: GLOBALHAWK AV-6

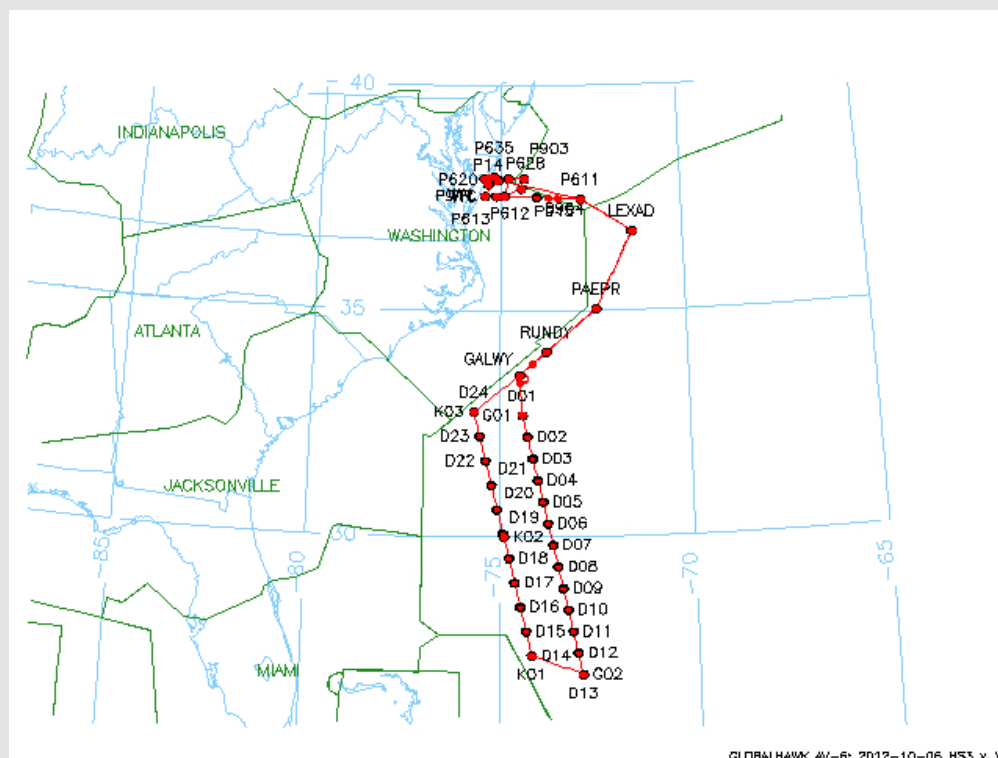
Flight Scientists:

Shift 1 (0800-1700 UT): Scott Braun, Amber Emory

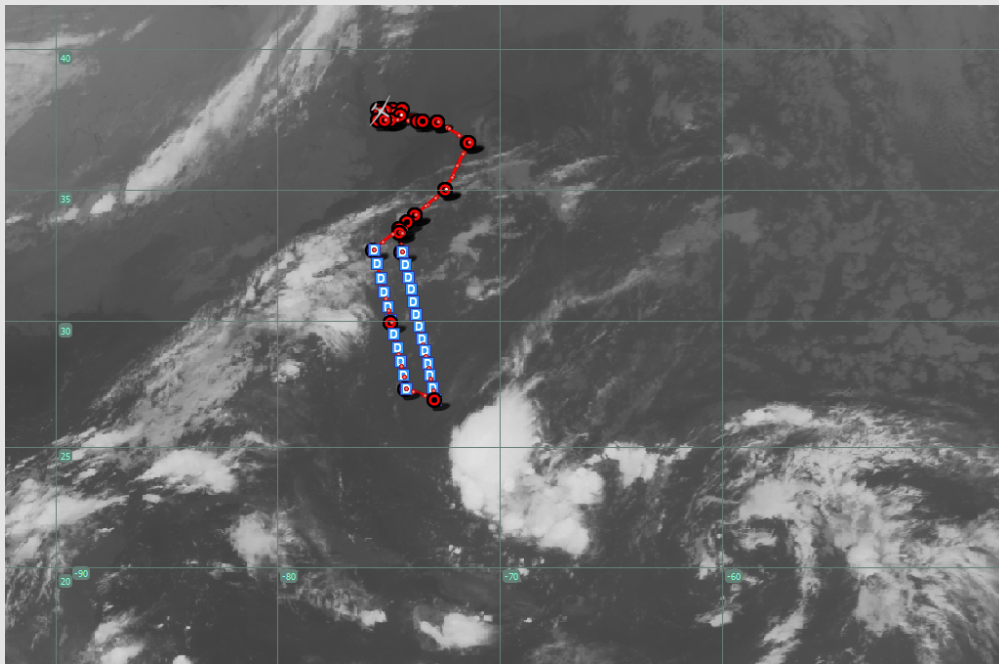
Shift 2 (1700-0100 UT): Paul A. Newman, Amber Emory, Jon

Mission goal: NPP and Aqua underflight for cal/val.

Flight pattern: The eastern part of the track is an Aqua underflight while the western part is an NPP underflight.

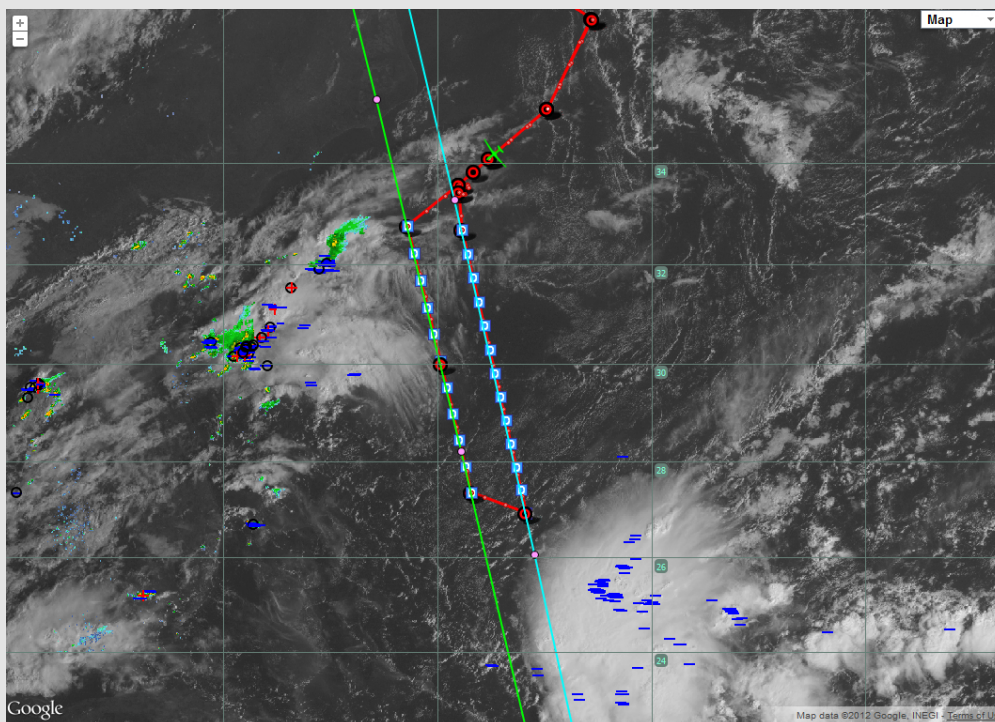


GLOBALHAWK AW-6: 2012-10-06_HS3 v. V3



GOES IR (above) prior to takeoff shows plenty of clear sky in the area of the flight.

Takeoff at 1256 UTC.



During transit (1432 UTC), clouds moving in from the west could extend into the flight track by the time we get there. Southern portion of flight legs may still be clear. The image also shows lightning and the U.S. radar network, as well as the NPP and Aqua overpasses.

1440 UTC: Dropsonde system is having issue with the interlock signal. May not be able to do drops. They will examine options during transit to see if there might be a work around.

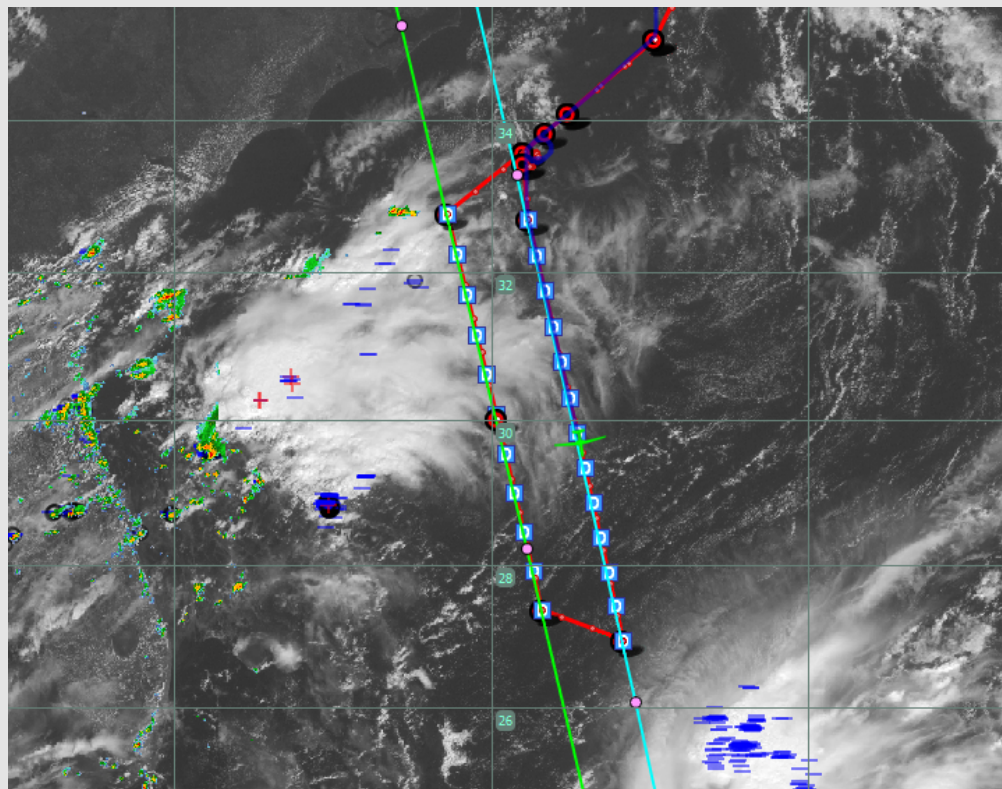
1524 UTC: Dropsonde determined that they cannot do drops. Likely a mechanical issue associated with the part of the

device that holds sondes in the launcher.

1610 UTC: Heading south along the Aqua track.

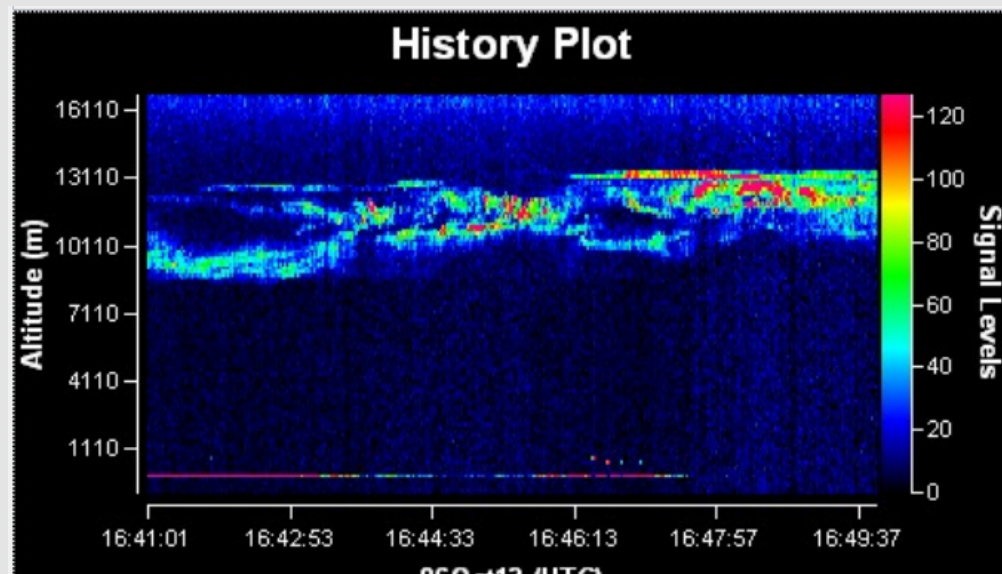
1630, Jon and Paul takeover from Scott. Amber still on duty.

1647 About ½ through Aqua track. There is convective system about 200 nm west of the track with cirrus blow off coming from this system.



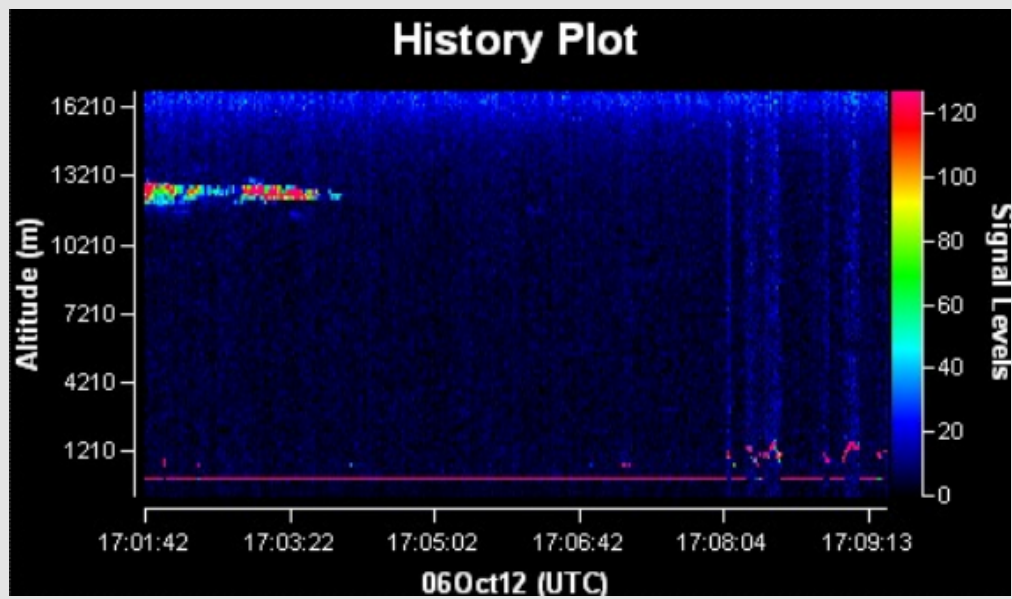
GOES vis ~ 1650UT, + Nexrad, + lightning

1659 CPL shows the cirrus at 10-13 km.



1706 On the southern end of this Aqua track, we've gotten into some relatively clear air with some popcorn cumulus

below us.

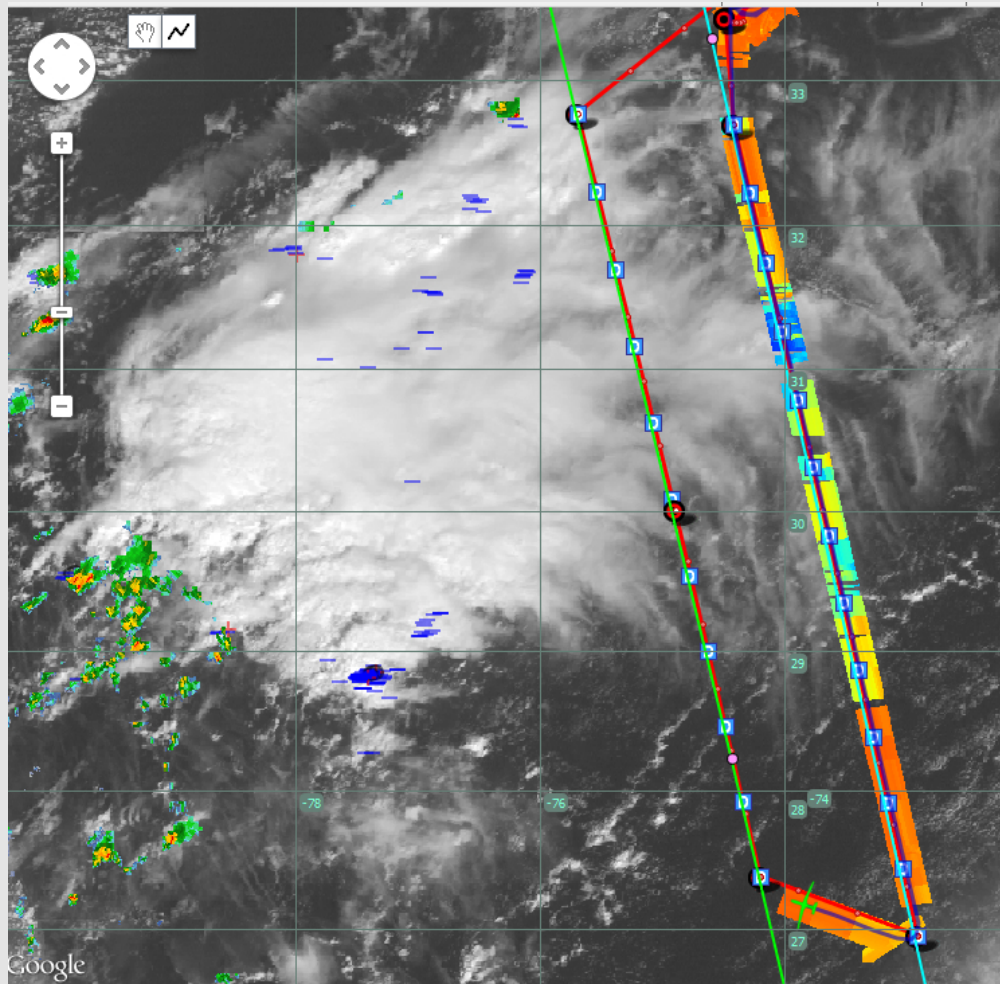


The CPL image above shows the dying off cirrus, the clear air, and the popcorn cumulus that extends upward a couple of km.

1719 A bit of cirrus at the southern end of the Aqua track. There is a large convective system about 120nm to the SE, High tops

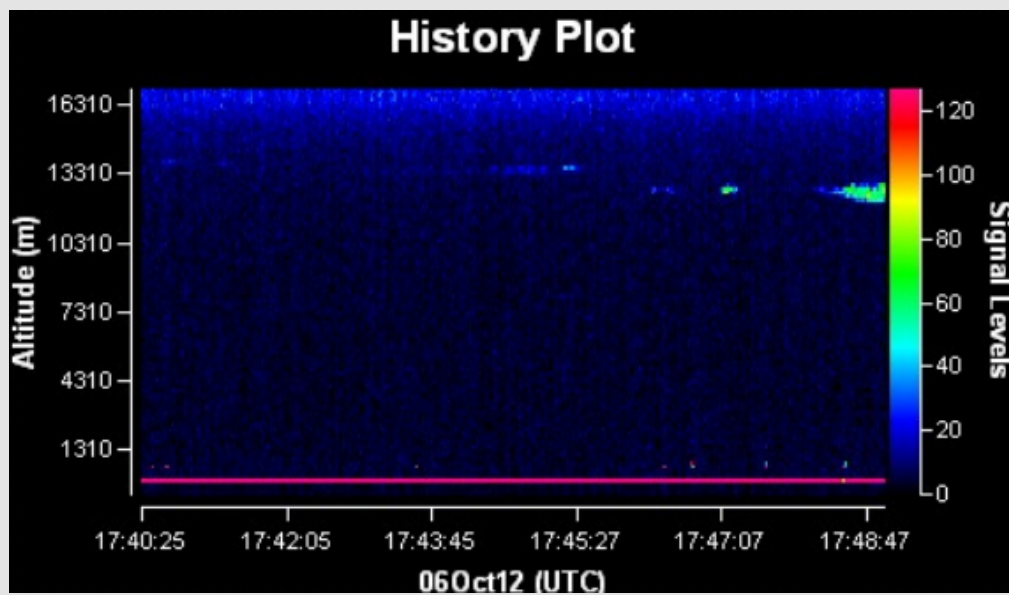
1724 GH turned WNW towards NPP track

1734 Turning NNW onto NPP track



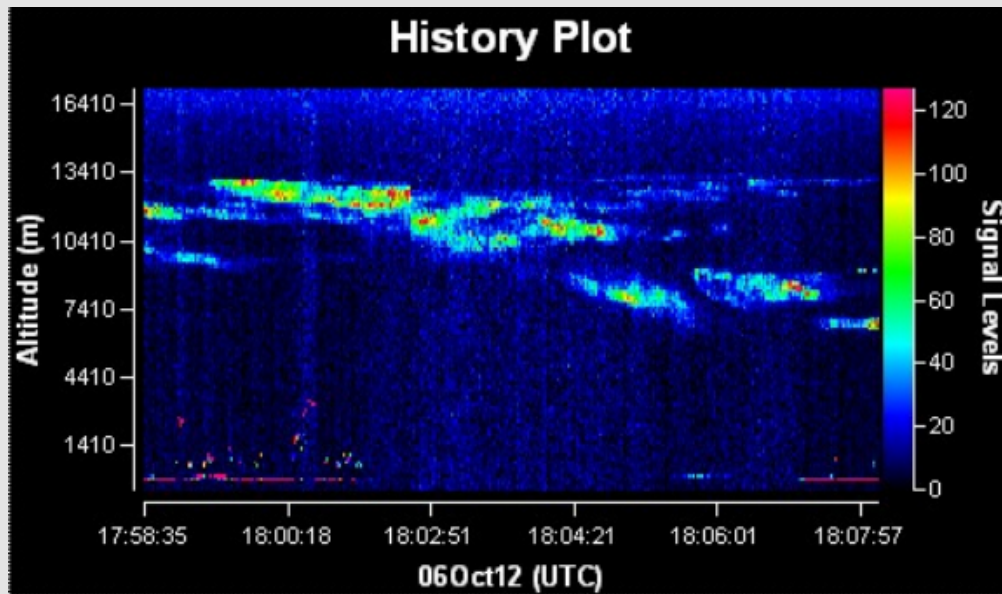
GOES vis with aircraft, +lightning, + nexrad, +SHIS 890-905 channel (cloud top T). Should hit the NPP intercept point within a few minutes.

1752 As the GOES image showed, the initial part of the NPP track was cloud free.

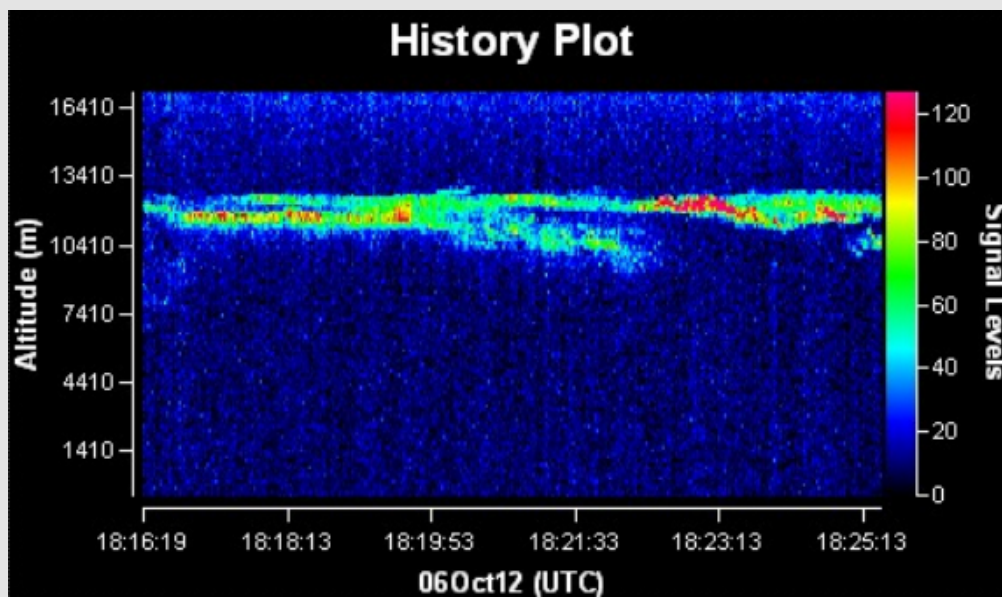


060ct12 (UTC)

1815 There was cirrus below us during the intercept of NPP at 1803Z. The air cleared a bit, but was still somewhat overcast.

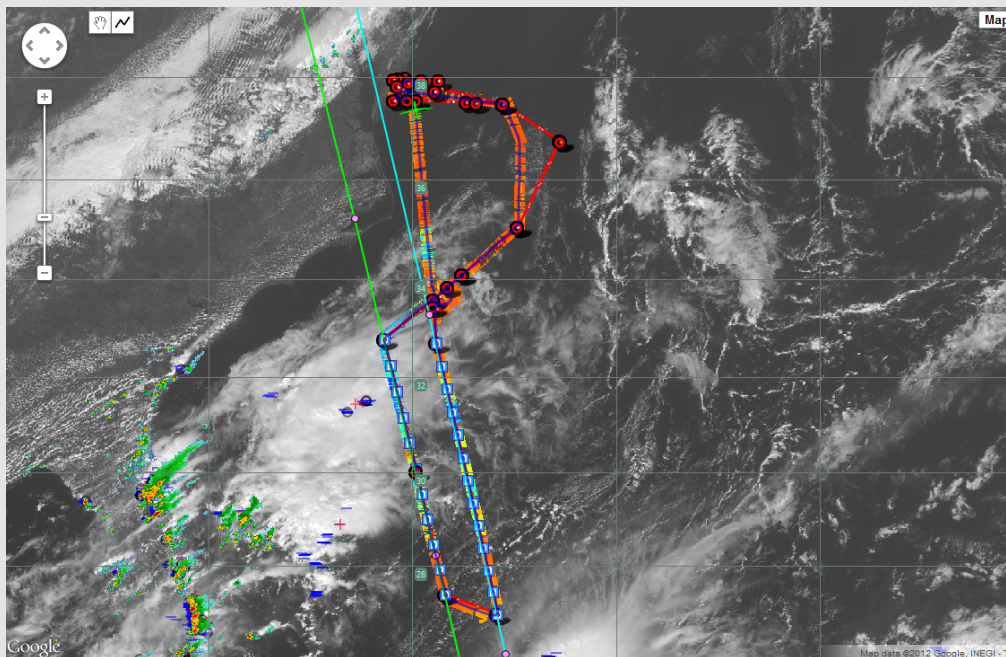


Lots of optically thick cirrus on the northern side of the track.



1830 turned off of track. Heading directly back to WFF. ETA ~ 2000. Clear conditions through landing.

1926 begin descent



GOES vis with aircraft, +lightning, + nexrad, +SHIS 890-905 channel (cloud top T).

1948 Started turning payload off.

2014 GH landed

Submitted by: Sue Tolley on 10/07/12

Related Flight Report:

Global Hawk #872 10/06/12

Flight Number: 872-0102

Payload Configuration: HS3 - TN872 2012 config

Nav Data Collected: No

Total Flight Time: 7.3 hours

Submitted by: Chris Naftel on 10/11/12

Flight Segments:

From:	WFF	To:	WFF
Start:	10/06/12 12:56 Z	Finish:	10/06/12 20:15 Z
Flight Time:	7.3 hours		
Log Number:	13H008	PI:	Marilyn Vasques
Funding Source:	Hal Maring - NASA - SMD - ESD Radiation Science Program		
Purpose of Flight:	Science		
Comments:	The purpose of this short flight was to under fly the NPP Satellite for comparison of data between the satellite sensors and the instruments on TN872. SHIS and CPL operated nominally, but the dropsonde system was not able to dispense any sondes.		

Flight Hour Summary:

	12H002	13H008
Flight Hours Approved in SOFRS	327	
Flight Hours Previously Approved		178.1
Total Used	148.9	46
Total Remaining		132.1

13H008 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
10/06/12	872-0102	Science	7.3	7.3	170.8	
10/12/12	872-0103	Ferry	9.7	17	161.1	
11/01/12	871-0082	Check	4.8	21.8	156.3	
11/05/12 - 11/06/12	871-0083	Science	24.2	46	132.1	

Source URL: https://airbornescience.nasa.gov/science_reports/HS3_-_Global_Hawk_872_10_06_12_Science_Report#comment-0

Page Last Updated: April 22, 2017

Page Editor: Brad Bulger

NASA Official: Bruce A. Tagg

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

12H002 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
08/28/12	872-0094	Check	5.5	5.5	321.5	
08/30/12	872-0095	Maintenance	0.7	6.2	320.8	
09/06/12 - 09/07/12	872-0096	Science	19.3	25.5	301.5	
09/11/12 - 09/12/12	872-0097	Science	25.7	51.2	275.8	
09/14/12 - 09/15/12	872-0098	Science	22.4	73.6	253.4	
09/19/12 - 09/20/12	872-0099	Science	24.8	98.4	228.6	
09/22/12 - 09/23/12	872-0100	Science	25.1	123.5	203.5	
09/26/12 - 09/27/12	872-0101	Science	25.4	148.9	178.1	